



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/632,981

08/04/2003

Jung-Hua Lai

2975

7590

04/26/2006

Jung-Hua Lai
P.O. Box No. 6-57, Junghe
Taipei 235,
TAIWAN

EXAMINER

PATEL, RITA RAMESH

ART UNIT

PAPER NUMBER

1746

DATE MAILED: 04/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/632,981

Applicant(s)

LAI, JUNG-HUA

Examiner

Rita R. Patel

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

The drawings received 08/04/03 are acceptable for examination purposes.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 2, applicant claims "the infrared control unit being placed within the hollow tube"; however, applicant fails to make a prior claim of an infrared control unit. It is unclear by the terms "the infrared control unit", which unit applicant is making reference to. Moreover, applicant makes claims to the use of ultraviolet light in claim 1, which is defined as follows: Relating to radiation having wavelengths in the range of about **4 to about 400 nanometers**, beyond the violet end of the visible spectrum (and thus beyond the range of human vision) ("ultraviolet".

Academic Press Dictionary of Science and Technology (1992). Retrieved 24 April 2006, from xreferplus. <http://www.xreferplus.com/entry/3172124>). Meanwhile, the term infrared light is: The portion of the invisible spectrum consisting of electromagnetic radiation with wavelengths in the range from **750 nanometers to 1 millimeter** ("infrared". Academic Press Dictionary of Science and Technology (1992). Retrieved 24 April 2006, from xreferplus. <http://www.xreferplus.com/entry/3117562>). It can be seen

Art Unit: 1746

that the wavelengths in which ultraviolet light and infrared light range are separate and non-overlapping groups.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erickson et al. herein referred to as "Erickson" (US Patent No. 5,178,173) and further in view of Eckhardt et al. herein referred to as "Eckhardt" (Pub. No. 2002/0168287) and Ifejika (US Patent No. 5,129,410).

Erickson teaches an ultrasonic contact lens cleaning device that has a hemispherical cover hingedly affixed to it wherein a container for a lens cleaning solution is mounted in the housing (Abstract). The housing 1 is attached to the hemispherical cover 2 by hinge means 3, whereby a container 4 for a lens cleaning solution of any suitable type is mounted in the housing 1 (col. 3, lines 34-38). Moreover, the container 4 has a lid 11, whereby a lens holder 12 is affixed to the lid 11 and holds a plurality of lenses separately, or spaced, or independently, from each other in a cleaning solution 13 (col. 4, lines 55-60). A high power drive duration timing circuit 23 times the high power ultrasonic drive duration for cleaning lenses and the low power drive duration timing circuit 22 times the lower power drive duration for soaking and

Art Unit: 1746

disinfecting lenses, where upon accomplishment of its function, circuit 22 energizes a light emitting diode (LED) 31 which is connected in the output of said timing circuit and placed at a window of the housing 1 where it is readily observable (col. 5, lines 3-12). As shown in Fig. 3 and 4 the power circuit comprises an output power stage 24 which is a current mode, push-pull unit having an inductor 25, an output transformer 26 and a pair of bipolar transistors 27 and 28, as shown in Fig. 4. The position is taken that one of ordinary skill in the art would at once envisage that said power circuit and components thereof are built upon a circuit board. Power is supplied to the power circuit via any suitable known type of input socket 33 (Fig. 1 and 4). As illustrated in Fig. 1 of Erickson, the cleaning apparatus shown is divided into upper and lower compartments, whereby the upper compartment is enclosed by the upper hemispherical cover and the rectangular lower compartment is separated from the upper compartment by a lateral wall there between. Moreover, in said wall dividing the upper and lower compartments, container 4 is positioned in a hole centered therein.

Additionally, Erickson teaches cleaning for said apparatus by means of ultrasonic vibrations, this may read on applicant's claims for sub-ultrasonic vibrations for cleaning. It would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the ultrasonic vibrations of said apparatus to achieve an anticipated amount of vibrational cleaning functions since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Art Unit: 1746

Erickson discloses the use of inductors and transistors on said circuit board for controllably operating said apparatus, however, applicant's claims the use of capacitors thereupon the circuit board. An inductor is defined as follows: One that inducts, especially a device that functions by or introduces inductance into a circuit ("inductor".

The American Heritage® Dictionary of the English Language (2003). Retrieved 24 April 2006, from xreferplus. <http://www.xreferplus.com/entry/4098596>). A transistor is defined as follows: A small electronic device containing a semiconductor and having at least three electrical contacts, used in a circuit as an amplifier, detector, or switch ("transistor". The American Heritage® Dictionary of the English Language (2003).

Retrieved 24 April 2006, from xreferplus. <http://www.xreferplus.com/entry/4141527>).

And a capacitor is defined as follows: A device composed of two conducting surfaces separated by a dielectric; it has the ability to store electrical energy and block the flow of direct current. "capacitor". Academic Press Dictionary of Science and Technology (1992). Retrieved 24 April 2006, from xreferplus.

<http://www.xreferplus.com/entry/3082645>). Therefore, the sequenced usage of an inductor and transistor, as taught by Erickson, may perform the same function as a capacitor; the inductor-transistor sequence provides inductance of energy and may be controllably released by switching on or off by the transistor. Correspondingly, the capacitor is able to store energy and controllably disseminate the energy stored. As a result, an inductor-transistor series may be used interchangeably with a singular capacitor, as a known equivalent in the art. It would be obvious to one of ordinary skill in the art at the time of the invention to use substitution of known equivalent structures.

Art Unit: 1746

In re Fout 213 USPQ 532 (CCPA 1982); *In re Susi* 169 USPQ 423 (CCPA 1971); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *In re Ruff* 118 USPQ 343 (CCPA 1958).

Furthermore, Erickson's teaching of container 4 may read on applicants claim of a hollow tube connected to the bottom of the upper compartment. On top of said hollow tube, applicant claims first and second holes thereon; Erickson's disclosure of side holes where lens holder 12 permits free flow of cleaning solution 13 on each of the lenses held therein (col. 3, lines 60-63) may also read on applicant's claims.

Furthermore, applicant claims a plate is placed under the inner lid and Erickson's illustration shown in Fig. 2 shows metal end sections 8, 9 (col. 3, line 44) which may read on applicant's claim for a plate placed under the inner lid.

Erickson teaches the claimed invention, however Erickson fails to explicitly state a motorized unit within the apparatus, a sensor, a UV light and magnetic strip. Eckhardt however, teaches the aforementioned features, except for a magnetic strip within a cleaning apparatus that may be used for cleaning contact lenses. Eckhardt discloses methods and apparatus for sterilizing or disinfecting irregularly-shaped objects; an embodiment of the invention is directed to a method including acts of introducing an object into a housing, causing the object to move through the housing, detecting the object with a sensor, an activating a lamp based on a detection of the object with the sensor, the lamp illumination the object as it moves through the housing (Abstract). It would be obvious to one of ordinary skill in the art at the time of the invention to provide a sensor in Erickson, as taught by Eckhardt to automatically detect the contact lens presence in the housing to appropriately cause lamp illumination when sensed and

Art Unit: 1746

activated to do so, thereby providing environmental and economic benefits, as well as being efficient. Eckhardt points out that objects that are handled or breathed-on by different people, or that come in contact with surfaces contaminated by other people or animals, can themselves become contaminated (Paragraph [0003]). Moreover, manual sterilization with disinfectant chemicals is sometimes done, but this is time consuming and not performed as often as is desirable (Paragraph [0004]); the use of ultraviolet (UV) light for sterilization is known in the art and has a number of potential advantages (Paragraph [0005]). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize UV light in Erickson, as taught by Eckhardt to achieve such potential convenience, increased cleanliness and effectiveness in cleaning. In addition, Eckhardt discloses a motor 11 coupled to drum 3 via a drive belt 13 which is caused to move drum 3 in the direction of arrow A shown in Figs. 1A-1B (Paragraph [0019]); it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate said motor feature taught by Eckhardt in Erickson to controllably move said drum and achieve drive reciprocating motion, necessitated by said cleaning methods. Eckhardt shows in Fig. 1A a housing 1 containing a drum 3 that defines a sterilization chamber 4, wherein drum 3 may be any structure that moves or rotates to tumble, agitate, or otherwise move an object, and may have a shape that is, e.g., cylindrical, spherical, square, or polygonal. A lamp 5 emits light for sterilization or disinfection, is provided within sterilization chamber 4. Lamp 5 may be mounted in any location that allows for illumination of the object and/or sterilization chamber 4 (Paragraph [0017]). It would have been obvious to one of ordinary skill in the art at the

Art Unit: 1746

time of the invention to affix the UV light taught by Eckhardt, in Erickson at a preferred location at the upper compartment for providing UV light to the lenses in a manner that is not wasteful. Additionally, a sensor may be provided at entrance port 21 to detect the presence of an object, for example, an optical sensor may detect an object at entrance port 19 and turn on lamps 5. The sensor may reduce the power consumption of the sterilizer/disinfector and extend the life of its components (e.g., lamps 5, motor 11, drive belt 13, bearings, etc.) (Paragraph [0033]). One or more sensors may be disposed in sterilization chamber 25 and coupled to lamps 5 (Paragraph [0034]). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Eckhardt's feature of using sensors for detecting presence of an object for cleaning a the entrance port /coupled to UV lamps in Erickson, with expectation of achieving effective sensing functions of the object to be cleaned.

Erickson and Eckhardt teach the claimed invention, however Erickson and Eckhardt fail to teach a magnetic strip located within said contact lens cleaning apparatus. However, Ifejika teaches a contact lens apparatus committed to cleaning by means of agitation as shown in Figure 2, by attracting and repelling of magnets 8 (col. 3, line 16), which read on applicant's claim for a magnetic strip. It would have been obvious to one of ordinary skill in the art at the time of the invention to be obvious to use a magnetic strip in Erickson and Eckhardt, as shown by Ifejika to achieve aid and control in cleaning said contact lenses by placing such magnets beneath said holders for the contact lenses, as diagrammed by Ifejika.

Art Unit: 1746

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Erickson, Eckhardt and Ifejika as applied to claims 1 and 2 above, and further in view of Umehara et al. herein referred to as "Umehara" (Us Patent No. 6,528,931).

Erickson, Eckhardt and Ifejika teach the claimed invention, however they do not say that the UV light is fixed to the positioning hole within the apparatus by an elastic ring. However, Umehara teaches a light bulb with a base 1, including a positioning ring 7 adapted to be fitted onto and mounted to a cylindrical-shaped base 2 which holds a bulb 3. The positioning ring includes elastic pieces 11 and weld pieces 12 formed on a fitting hole 8, through which the base is inserted, the elastic pieces being adapted to resiliently abut against an outer peripheral surface of the base (Abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate said feature of Umehara in the teachings of Erickson, Eckhardt and Ifejika shown above, to achieve resilient abutment of a light held within said apparatus.

Conclusion

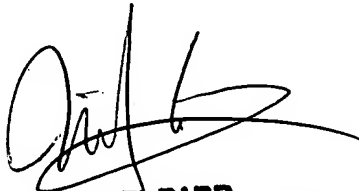
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rita R. Patel whose telephone number is (571) 272-8701. The examiner can normally be reached on M-F: 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1746

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RRP



MICHAEL BARR
SUPERVISORY PATENT EXAMINER